

1 What is claimed is:

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3 1. A process for applying microcapsules to a textile material, comprising:
4 contacting the textile material with the microcapsules;
5 dispersing the microcapsules around and through the textile material with a dispersant;

6 and

7 adhering the dispersed microcapsules to the textile material with a binder.

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9 2. The process for applying microcapsules to a textile material of claim 1, further
10 comprising, prior to contacting the textile material with the microcapsules, measuring a
11 predetermined weight of the microcapsules and diluting the predetermined weight of the
12 microcapsules with warm water in a microcapsule-to-water ratio of approximately 10 to 1.

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14 3. The process for applying microcapsules to a textile material of claim 1, wherein
15 contacting the textile material with the microcapsules comprises physically dispersing the
16 microcapsules around the textile material in a treatment bath.

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18 4. The process for applying microcapsules to a textile material of claim 3, wherein
19 physically dispersing the microcapsules around the textile material in the bath further comprises
20 stirring the bath for three minutes.

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22 5. The process for applying microcapsules to a textile material of claim 1, further
23 comprising, after dispersing the microcapsules with the dispersant in a treatment bath, heating

1 the bath to a temperature in the range of about 80° F to 120° F for a period of between 8 and 20
2 minutes.

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4 6. The process for applying microcapsules to a textile material of claim 5, wherein heating
5 the bath comprises heating the bath to a temperature of 100° F for approximately 8 minutes.

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7 7. The process for applying microcapsules to a textile material of claim 1, further
8 comprising, after adhering the dispersed microcapsules to the textile material with a binder in a
9 treatment bath, heating the bath to a temperature in the range of about 80° F to 120° F for a
10 period of between 8 and 20 minutes.

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12 8. The process for applying microcapsules to a textile material of claim 7, wherein heating
13 the bath comprises heating the bath to a temperature of 100° F for approximately 10 minutes.

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15 9. The process for applying microcapsules to a textile material of claim 7, further
16 comprising draining the treatment bath.

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18 10. The process for applying microcapsules to a textile material of claim 9, further
19 comprising rinsing the textile material.

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21 11. The process for applying microcapsules to a textile material of claim 10, wherein rinsing
22 the textile material further comprises rinsing the textile material with water having a temperature
23 in the range of about 70° F to 110° F for a period of between 5 and 10 minutes.

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- 2 12. The process for applying microcapsules to a textile material of claim 11, wherein rinsing
- 3 the textile material with water comprises rinsing the textile material with circulating water
- 4 having a temperature of 80° F for approximately 5 minutes.
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- 6 13. The process for applying microcapsules to a textile material of claim 10, further
- 7 comprising draining the treatment bath after rinsing the textile material.
- 8
- 9 14. The process for applying microcapsules to a textile material of claim 13, further
- 10 comprising substantially filling the treatment bath with water having a temperature of about 80°
- 11 F.
- 12
- 13 15. The process for applying microcapsules to a textile material of claim 14, further
- 14 comprising adding a finishing agent to the treatment bath.
- 15
- 16 16. The process for applying microcapsules to a textile material of claim 15, wherein the
- 17 finishing agent is a lotion finish.
- 18
- 19 17. The process for applying microcapsules to a textile material of claim 1, wherein the
- 20 microcapsules, the dispersant, and the binder each have an ionic charge, and the ionic charge of
- 21 the microcapsules is opposite the ionic charge of the dispersant and the binder.
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1 18. The process for applying microcapsules to a textile material of claim 17, wherein the
2 microcapsules have an anionic charge and the dispersant and the binder each have a cationic
3 charge.

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5 19. The process for applying microcapsules to a textile material of claim 1, wherein the
6 microcapsules contain a moisturizing agent.

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8 20. The process for applying microcapsules to a textile material of claim 1, wherein the
9 microcapsules contain a fragrance.

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11 21. The process for applying microcapsules to a textile material of claim 1, wherein the
12 microcapsules contain a moisturizing agent and a fragrance.

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14 22. The process for applying microcapsules to a textile material of claim 1, wherein the
15 microcapsules contain a vitamin.

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17 23. The process for applying microcapsules to a textile material of claim 1, wherein the
18 microcapsules contain a mixture of different vitamins.

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20 24. The process for applying microcapsules to a textile material of claim 1, wherein the
21 dispersant is silicone-based.

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1 25. The process for applying microcapsules to a textile material of claim 24, wherein the
2 silicone-based dispersant is a silicone finish.

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4 26. The process for applying microcapsules to a textile material of claim 1, wherein the
5 binder is an acrylic.

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7 27. The process for applying microcapsules to a textile material of claim 1, wherein prior to
8 contacting the textile material with the microcapsules, the textile material has completed a
9 dyeing process.

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11 28. The process for applying microcapsules to a textile material of claim 1, wherein the
12 process comprises a finishing process for fine denier hosiery.

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14 29. The process for applying microcapsules to a textile material of claim 28, wherein the fine
15 denier hosiery comprises nylon.

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17 30. A process for applying microcapsules to a textile material, comprising:
18 measuring a predetermined weight of the microcapsules and diluting the predetermined
19 weight of the microcapsules with warm water in a microcapsule-to-water ratio of approximately
20 10 to 1;
21 placing the textile material in a treatment bath;
22 physically dispersing the microcapsules in the bath to contact the textile material with the
23 microcapsules;

1 dispersing the microcapsules around and through the textile material with a silicone-
2 based dispersant;
3 heating the bath to a temperature in the range of about 80° F to 120° F for a period of
4 between 8 and 20 minutes;
5 adding a binder to the bath to adhere the dispersed microcapsules to the textile material;
6 heating the bath to a temperature in the range of about 80° F to 120° F for a period of
7 between 8 and 20 minutes;
8 draining the treatment bath;
9 rinsing the textile material with water having a temperature in the range of about 70° F to
10 110° F for a period of between 5 and 10 minutes;
11 draining the treatment bath;
12 substantially filling the treatment bath with water having a temperature of about 80° F;
13 and
14 adding a finishing agent to the treatment bath,
15 wherein the microcapsules, the dispersant, and the binder each have an ionic charge, and
16 the ionic charge of the microcapsules is opposite the ionic charge of the dispersant and the
17 binder, and
18 wherein the microcapsules are thoroughly dispersed and evenly applied to the textile
19 material.

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21 31. The process for applying microcapsules to a textile material of claim 30, wherein the
22 microcapsules contain a moisturizing agent.

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1 32. The process for applying microcapsules to a textile material of claim 30, wherein the
2 microcapsules contain a fragrance.

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4 33. The process for applying microcapsules to a textile material of claim 30, wherein the
5 microcapsules contain a moisturizing agent and a fragrance.

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7 34. The process for applying microcapsules to a textile material of claim 30, wherein the
8 microcapsules contain a vitamin.

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10 35. The process for applying microcapsules to a textile material of claim 30, wherein the
11 microcapsules contain a mixture of different vitamins.

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13 36. The process for applying microcapsules to a textile material of claim 30, wherein the
14 process comprises a finishing process for fine denier hosiery.

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16 37. A process for applying microcapsules to a textile material, the microcapsules having an
17 anionic charge, comprising:

18 measuring a predetermined weight of the microcapsules and diluting the predetermined
19 weight of the microcapsules with warm water in a microcapsule-to-water ratio of approximately
20 10 to 1;

21 placing the textile material in a treatment bath;

22 stirring the bath for three minutes to physically disperse the microcapsules and contact
23 the textile material with the microcapsules;

1 dispersing the microcapsules around and through the textile material with a dispersant,

2 the dispersant being a silicone finish having a cationic charge;

3 heating the bath to a temperature of 100° F for approximately 8 minutes;

4 adding an acrylic binder having a cationic charge to adhere the dispersed microcapsules

5 to the textile material;

6 heating the bath to a temperature of 100° F for approximately 10 minutes;

7 draining the treatment bath;

8 rinsing the textile material with circulating water having a temperature of 80° F for

9 approximately 5 minutes;

10 draining the treatment bath;

11 substantially filling the treatment bath with water having a temperature of about 80° F;

12 and

13 adding a lotion finishing agent to the treatment bath,

14 wherein the microcapsules are thoroughly dispersed and evenly applied to the textile

15 material.

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17 38. The process for applying microcapsules to a textile material of claim 37, wherein the

18 microcapsules contain a moisturizing agent.

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20 39. The process for applying microcapsules to a textile material of claim 37, wherein the

21 microcapsules contain a fragrance.

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1 40. The process for applying microcapsules to a textile material of claim 37, wherein the
2 microcapsules contain a moisturizing agent and a fragrance.

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4 41. The process for applying microcapsules to a textile material of claim 37, wherein the
5 microcapsules contain a vitamin.

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7 42. The process for applying microcapsules to a textile material of claim 37, wherein the
8 microcapsules contain a mixture of different vitamins.

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10 43. The process for applying microcapsules to a textile material of claim 37, wherein the
11 process comprises a finishing process for fine denier nylon hosiery.

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13 44. A textile material having microcapsules applied thereto, the microcapsules applied to the
14 textile material by:

15 placing the textile material in a treatment bath,

16 contacting the textile material with the microcapsules,

17 dispersing the microcapsules around and through the textile material with a dispersant,

18 and

19 adhering the dispersed microcapsules to the textile material with a binder.

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21 45. The textile material of claim 44, wherein the textile material is a garment.

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23 46. The textile material of claim 45, wherein the garment is fine denier hosiery.

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- 2 47. The textile material of claim 44, wherein the microcapsules contain a moisturizing agent.
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- 4 48. The textile material of claim 44, wherein the microcapsules contain a fragrance.
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- 6 49. The textile material of claim 44, wherein the microcapsules contain a moisturizing agent
- 7 and a fragrance.
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- 9 50. The textile material of claim 44, wherein the microcapsules contain a vitamin.
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- 11 51. The textile material of claim 44, wherein the microcapsules contain a mixture of different
- 12 vitamins.
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- 14 52. A textile material having microcapsules applied thereto, the microcapsules applied to the
- 15 textile material according to the process of claim 30.
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- 17 53. The textile material of claim 52, wherein the textile material is a garment.
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- 19 54. The textile material of claim 53, wherein the garment is fine denier hosiery.
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- 21 55. The textile material of claim 52, wherein the microcapsules contain a moisturizing agent.
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- 23 56. The textile material of claim 52, wherein the microcapsules contain a fragrance.

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- 2 57. The textile material of claim 52, wherein the microcapsules contain a moisturizing agent
- 3 and a fragrance.
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- 5 58. The textile material of claim 52, wherein the microcapsules contain a vitamin.
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- 7 59. The textile material of claim 52, wherein the microcapsules contain a mixture of different
- 8 vitamins.
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- 10 60. A textile material having microcapsules applied thereto, the microcapsules applied to the
- 11 textile material according to the process of claim 37.
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- 13 61. The textile material of claim 60, wherein the textile material is a garment.
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- 15 62. The textile material of claim 61, wherein the garment is fine denier nylon hosiery.
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- 17 63. The textile material of claim 60, wherein the microcapsules contain a moisturizing agent.
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- 19 64. The textile material of claim 60, wherein the microcapsules contain a fragrance.
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- 21 65. The textile material of claim 60, wherein the microcapsules contain a moisturizing agent
- 22 and a fragrance.
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1 66. The textile material of claim 60, wherein the microcapsules contain a vitamin.

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3 67. The textile material of claim 60, wherein the microcapsules contain a mixture of different
4 vitamins.

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